



DIALOG(R)File 351:Derwent WPI
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WPI Acc No: 1987-281009/198740

5 XRAM Acc No: C87-119345

New spiro-naphthopyran cpd. cpds. - useful as photochromic materials
developing colour by UV light

Patent Assignee: TORAY IND INC (TORA)

Number of Countries: 001 Number of Patents: 001

10 Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 62195383	A	19870828	JP 8635323	A	19860221	198740 B

Priority Applications (No Type Date): JP 8635323 A 19860221

15 Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 62195383	A		5		

Abstract (Basic): JP 62195383 A

20 Sprionaphthopyran cpds of formula (I) are new each R²-R⁵ are each 1
1-4C alkyl, halogen-substd. 1-2C alkyl, 1-4C alkoxyl, halogen or nitro,
each l and n = an integer of 0-2, each m and t = an integer of 0-4 and
R' = 1-20C alkyl opt. substd., 3-10C cycloalkyl opt. substd., 7-20C
aralkyl opt. substd. or 6-14C aryl opt. substd.

25 USE/ADVANTAGE - (I) are useful as photochromic materials with
fatigue resistance of colour development and disappearance for
printing, photography, optical equipment, recording, clothes and
ornaments capable of colour development by UV light irradiation.

30 In an example, a soln. of 5g 1,3,3-trimethyl- 2-methylenebenz (g)
indoline and 5g 2-hydroxy-1-naphthaldehyde in 100 ml ethanol was
refluxed for 2 hours in N₂ flow and the reaction soln. was cooled,
precipitating. To the precipitate, was added a small amt of ethanol and
the mixt is filtered. The crude crystals were dissolved in ethanol, the
35 soln was heated to 50-60 deg C, to the soln., was added 10g active
carbon and the mixt was stirred and filtered. The filtrate is
concentrated and the obtd solid was recrystallised from ethanol to give
1,3,3-trimethylspiro (benz (g) indoline-2,3' -(3H)-naphtho(2,1-b)pyran)
with a m.pt. of 204 deg.C.

40 Title Terms: NEW; SPIRO; NAPHTHO; PYRAN; COMPOUND; COMPOUND; USEFUL;
PHOTOCHROMIC; MATERIAL; DEVELOP; COLOUR; ULTRAVIOLET; LIGHT

Derwent Class: E13; E24; G06

International Patent Class (Additional): C07D-491/10; C09K-009/00

File Segment: CPI

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FEB 12 2001
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